

CLAIMS

1. A medical device having at least one surface, comprising: a first polymer on all or a portion of the surface, wherein the polymer comprises at least one active agent incorporated into the polymer backbone, and wherein a first active agent is
5 disassociated from the polymer upon hydrolysis.
2. A medical device of claim 1, comprising at least two or more surfaces.
3. A medical device of claim 2, wherein all or a portion of the two or more surfaces are covered with the polymer.
4. A medical device of claim 1, wherein the first active agent is selected from the
10 group consisting of: analgesics, anesthetics, antiacne agents, antibiotics, anticholinergics, anticoagulants, anticonvulsants, antidiabetic agents, antidyskinetics, antifibrotic agents, antifungal agents, antiglaucoma agents, anti-infectives, anti-inflammatory compounds, antimicrobial compounds, antineoplastics, anti-Parkinson's agents, antiosteoporotics, antiseptics, antispuritics, antithrombotics, antiviral
15 compounds, bacteriostatic compounds, bone resorption inhibitors, calcium regulators, cardioprotective agents, cardiovascular agents, central nervous system stimulants, cholinesterase inhibitors, contraceptives, deodorants, disinfectants, dopamine receptor agonists, erectile dysfunction agents, fertility agents, gastrointestinal agents, gout agents, hormones, hypnotics, immunomodulators, immunosuppressives, keratolytics,
20 migraine agents, motion sickness agents, muscle relaxants, nucleoside analogs, obesity agents, ophthalmic agents, osteoporosis agents, parasympatholytics, parasympathomimetics, prostaglandins, psychotherapeutic agents, respiratory agents, sclerosing agents, sedatives, skin and mucous membrane agents, smoking cessation

agents, sympatholytics, ultraviolet screening agents, urinary tract agents, vaginal agents, and vasodilators.

5. A medical device of claim 4, wherein the first active agent is selected from the group consisting of: salicylic acid, diflunisal and methotrexate.

5 6. A medical device of claim 1, wherein a second active agent is disassociated from the first polymer upon hydrolysis.

7. A medical device of claim 6, wherein the first and second active agents are the same active agent.

8. A medical device of claim 7, wherein the first and second active agent is
10 diflunisal.

9. A medical device of claim 6, wherein the first active agent is selected from the group consisting of: salicylic acid, diflunisal and methotrexate; and wherein the second active agent is selected from the group consisting of: paclitaxel and rapamycin.

10. A medical device of claim 1, wherein a second active agent is dispersed within
15 the polymer matrix of the first polymer such that the second active agent is released upon degradation of the first polymer.

11. A medical device of claim 10, wherein the first and second active agents are the same.

12. A medical device of claim 11, wherein the active agent is diflunisal.

20 13. A medical device of claim 10, wherein the first active agent is selected from the group consisting of: salicylic acid, diflunisal and methotrexate; and wherein the second active agent is selected from the group consisting of: paclitaxel and rapamycin.

14. A medical device of claim 1, wherein a second active agent is appended to the first polymer such that the second active agent is released under physiological conditions.
15. A medical device of claim 14, wherein the first and second active agents are the same.
16. A medical device of claim 15, wherein the active agent is diflunisal.
17. A medical device of claim 14, wherein the first active agent is selected from the group consisting of: salicylic acid, diflunisal and methotrexate; and wherein the second active agent is selected from the group consisting of: paclitaxel and rapamycin.
18. A medical device of claim 1, wherein the medical device is a stent.
19. A medical device of claim 1, wherein the first polymer covers all or a portion of the surface in a thickness of about 100 nm to 1 cm.
20. A medical device of claim 1, wherein the first polymer covers all or a portion of the surface in a thickness of about 0.5 μ m to about 2.0 mm.
21. A medical device of claim 1, wherein the active agent is disassociated from the first polymer over a period of about 2 days to about 2 years.
22. A medical device having at least one surface, comprising: a first polymer and a second polymer on all or a portion of the surface, wherein the first polymer is capable of breaking down in the physiologic milieu to form a first active agent, and the second polymer is capable of breaking down in the physiologic milieu to form a second active agent.
23. A medical device of claim 22, wherein the first and second polymer are the same type of polymer.

24. A medical device of claim 22, comprising at least two or more surfaces.
25. A medical device of claim 24, wherein all or a portion of the two or more surfaces are covered with the polymer.
26. A medical device of claim 22, wherein the first active agent is selected from the
- 5 group consisting of: analgesics, anesthetics, antiacne agents, antibiotics, anticholinergics, anticoagulants, anticonvulsants, antidiabetic agents, antidyskinetics, antifibrotic agents, antifungal agents, antiglaucoma agents, anti-infectives, anti-inflammatory compounds, antimicrobial compounds, antineoplastics, anti-Parkinson's agents, antiosteoporotics, antiseptics, antispuritics, antithrombotics, antiviral
- 10 compounds, bacteriostatic compounds, bone resorption inhibitors, calcium regulators, cardioprotective agents, cardiovascular agents, central nervous system stimulants, cholinesterase inhibitors, contraceptives, deodorants, disinfectants, dopamine receptor agonists, erectile dysfunction agents, fertility agents, gastrointestinal agents, gout agents, hormones, hypnotics, immunomodulators, immunosuppressives, keratolytics,
- 15 migraine agents, motion sickness agents, muscle relaxants, nucleoside analogs, obesity agents, ophthalmic agents, osteoporosis agents, parasympatholytics, parasympathomimetics, prostaglandins, psychotherapeutic agents, respiratory agents, sclerosing agents, sedatives, skin and mucous membrane agents, smoking cessation agents, sympatholytics, ultraviolet screening agents, urinary tract agents, vaginal
- 20 agents, and vasodilators.
27. A medical device of claim 22, wherein the first and second active agents are the same.
28. A medical device of claim 27, wherein the active agent is diflunisal.

29. A medical device of claim 22, wherein the first active agent is selected from the group consisting of: salicylic acid, diflunisal and methotrexate.
30. A medical device of claim 22, wherein a third active agent is dispersed within
5 the polymer matrix of the first polymer such that the third active agent is released upon degradation of the first polymer.
31. A medical device of claim 22, wherein the first or second active agent is selected from the group consisting of: salicylic acid, diflunisal and methotrexate; and wherein the third active agent is selected from the group consisting of: paclitaxel and
10 rapamycin.
32. A medical device of claim 22, wherein a third active agent is appended to the first polymer such that the third active agent is released under physiological conditions.
33. A medical device of claim 32, wherein the first and/or second active agent is selected from the group consisting of: salicylic acid, diflunisal and methotrexate; and
15 wherein the third active agent is selected from the group consisting of: paclitaxel and rapamycin.
34. A medical device of claim 22, wherein the medical device is a stent.
35. A medical device of claim 22, wherein the first and second polymers cover all or a portion of the surface in a thickness of about 100 nm to 1 cm.
- 20 36. A medical device of claim 22, wherein the first and second polymers cover all or a portion of the surface in a thickness of about 0.5 μ m to about 2.0 mm.

37. A medical device of claim 22, wherein the first and second active agents are disassociated from the first and second polymers over a period of about 2 days to about 2 years.

38. A medical device having at least one surface, comprising: a first polymer and a second polymer on all or a portion of the surface, a first polymer and a second polymer on all or a portion of the surface, wherein the first polymer is capable of breaking down in the physiologic milieu to form a first active agent, and the second polymer is capable of hydrolyzing to form a second active agent, wherein the first and second active agents combine *in vivo* to form a third active agent.

39. A stent having at least one surface, comprising: a first polymer on all or a portion of the surface, wherein a first active agent is disassociated from the polymer upon hydrolysis.

40. A stent of claim 39, comprising at least two or more surfaces.

41. A stent of claim 40, wherein all or a portion of the two or more surfaces are covered with the polymer.

42. A stent of claim 39, wherein the first active agent is selected from the group consisting of: analgesics, anesthetics, antibiotics, anticholinergics, anticoagulants, anticonvulsants, antidyskinetics, antifibrotic agents, antifungal agents, , anti-infectives, anti-inflammatory compounds, antimicrobial compounds, antineoplastics, antiseptics, antisporatics, antithrombotics, antiviral compounds, bacteriostatic compounds, calcium regulators, cardioprotective agents, cardiovascular agents, central nervous system stimulants, cholinesterase inhibitors, disinfectants, hormones, immunomodulators, immunosuppressives, keratolytics, muscle relaxants, nucleoside analogs,

parasympatholytics, parasympathomimetics, prostaglandins, sclerosing agents, sedatives, sympatholytics, ultraviolet screening agents, and vasodilators.

43. A stent of claim 39, wherein the first active agent is selected from the group consisting of: salicylic acid, diflunisal and methotrexate.

5 44. A stent of claim 39, wherein a second active agent is disassociated from the first polymer upon hydrolysis.

45. A stent of claim 44, wherein the first and second active agents are the same.

46. A stent of claim 45, wherein the active agent is diflunisal.

47. A stent of claim 44, wherein the first active agent is selected from the group
10 consisting of: salicylic acid, diflunisal and methotrexate; and wherein the second active agent is selected from the group consisting of: paclitaxel and rapamycin.

48. A stent of claim 39, wherein a second active agent is dispersed within the polymer matrix of the first polymer such that the second active agent is released upon degradation of the first polymer.

15 49. A stent of claim 48, wherein the first and second active agents are the same.

50. A stent of claim 49, wherein the active agent is diflunisal.

51. A stent of claim 48, wherein the first active agent is selected from the group consisting of: salicylic acid, diflunisal and methotrexate; and wherein the second active agent is selected from the group consisting of: paclitaxel and rapamycin.

20 52. A stent of claim 39, wherein a second active agent is appended to the first polymer such that the second active agent is released under physiological conditions.

53. A stent of claim 52, wherein the first and second active agents are the same.

54. A stent of claim 53, wherein the active agent is diflunisal.

55. A stent of claim 52, wherein the first active agent is selected from the group consisting of: salicylic acid, diflunisal and methotrexate; and wherein the second active agent is selected from the group consisting of: paclitaxel and rapamycin.
- 5 56. A stent of claim 39, wherein the first polymer covers all or a portion of the surface in a thickness of about 100 nm to 1 cm.
57. A stent of claim 39, wherein the first polymer covers all or a portion of the surface in a thickness of about 0.5 μ m to about 2.0 mm.
58. A stent of claim 39, wherein the active agent is disassociated from the first
10 polymer over a period of about 2 days to about 2 years.
59. A method for delivering an active agent to an interior surface of a vein or an artery, comprising:
- providing a medical device having at least one surface, comprising: a first polymer on all or a portion of the surface, wherein a first active agent is disassociated
15 from the polymer upon hydrolysis; and
- positioning the medical device at or near the interior surface of the vein or the artery;
- wherein the first active agent is disassociated from the polymer upon hydrolysis and delivered to the interior surface of the vein or artery.
- 20 60. A method of claim 59, wherein the medical device is a stent.
61. A method of claim 60, wherein the stent comprises at least two or more surfaces.

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62. A method of claim 61, wherein all or a portion of the two or more surfaces are covered with the polymer.

63. A method of claim 59, wherein the first active agent is selected from the group consisting of: analgesics, anesthetics, antibiotics, anticholinergics, anticoagulants, anticonvulsants, antidyskinetics, antifibrotic agents, antifungal agents, , anti-infectives, anti-inflammatory compounds, antimicrobial compounds, antineoplastics, antiseptics, antisporatics, antithrombotics, antiviral compounds, bacteriostatic compounds, calcium regulators, cardioprotective agents, cardiovascular agents, central nervous system stimulants, cholinesterase inhibitors, disinfectants, hormones, immunomodulators, immunosuppressives, keratolytics, muscle relaxants, nucleoside analogs, parasympatholytics, parasympathomimetics, prostaglandins, sclerosing agents, sedatives, sympatholytics, ultraviolet screening agents, and vasodilators.

64. A method of claim 59, wherein the first active agent is selected from the group consisting of: salicylic acid, diflunisal and methotrexate.

65. A method of claim 59, wherein a second active agent is disassociated from the first polymer upon hydrolysis.

66. A method of claim 65, wherein the first and second active agents are the same.

67. A method of claim 66, wherein the active agent is diflunisal.

68. A method of claim 65, wherein the first active agent is selected from the group consisting of: salicylic acid, diflunisal and methotrexate; and wherein the second active agent is selected from the group consisting of: paclitaxel and rapamycin.

69. A method of claim 59, wherein a second active agent is dispersed within the polymer matrix of the first polymer such that the second active agent is released upon degradation of the first polymer.
70. A method of claim 69, wherein the first and second active agents are the same.
- 5 71. A method of claim 70, wherein the active agent is diflunisal.
72. A method of claim 69, wherein the first active agent is selected from the group consisting of: salicylic acid, diflunisal and methotrexate; and wherein the second active agent is selected from the group consisting of: paclitaxel and rapamycin.
73. A method of claim 59, wherein a second active agent is appended to the first
10 polymer such that the second active agent is released under physiological conditions.
74. A method of claim 73, wherein the first and second active agents are the same.
75. A method of claim 74, wherein the active agent is diflunisal.
76. A method of claim 73, wherein the first active agent is selected from the group consisting of: salicylic acid, diflunisal and methotrexate; and wherein the second active
15 agent is selected from the group consisting of: paclitaxel and rapamycin.
77. A method of claim 59, wherein the first polymer covers all or a portion of the surface in a thickness of about 100 nm to 1 cm.
78. A method of claim 59, wherein the first polymer covers all or a portion of the surface in a thickness of about 0.5 μ m to about 2.0 mm.
- 20 79. A method of claim 59, wherein the active agent is disassociated from the first polymer over a period of about 2 days to about 2 years.